

IN THE CLAIMS

1-112. (canceled)

113. (previously presented) A system for detecting the growth of microorganisms in a sample in a container, comprising:
an apparatus comprising:

a module comprising a plurality of openings configured for receiving sample containers;

a detector unit comprising a plurality of lasers each of which emit radiation at a substantially single wavelength, that wavelength being one at which a gas selected from the group consisting of O₂, CO₂, NH₃, H₂S and CH₄ absorbs radiation, said substantially single wavelength at which CO₂ absorbs radiation being approximately 2.004 micrometers, and wherein at least a first laser emits radiation at a wavelength that is different from at least one other laser and a plurality of detectors, each of which is associated with a laser wherein each detector detects at least a portion of said radiation emitted from its associated laser, and wherein the detectors are positioned relative to the lasers such that a gas-containing portion of the sample containers can pass between said laser and said detector, and

a signal analyzer that analyzes said detected radiation from said plurality of lasers to determine a parameter from a plurality of said gases, said parameter selected from the group consisting of the pressure of the gas in the container, the concentration of the gas in the container and the presence of the gas in the container; and

sample containers that are substantially optically transparent at said emission wavelength of said plurality of lasers.

114. (previously presented) The system of claim 113, wherein said laser is a monomodal, distributed feedback laser.

115. (previously presented) The system of claim 113, wherein said signal analyzer includes a spectrography device, adapted to spectrographically analyze said detected portion of said radiation.

116. (canceled).

117. (currently amended) The system of claim 116 146, wherein said containers are arranged in a plurality of rows and columns, and said housing is adapted to move along said rows and said columns.

118. (previously presented) The system of claim 117, wherein said housing is adapted to extend said laser and said detector toward each said container and to retract said laser and said detector away from each said container.

119. (currently amended) The system of claim 113, wherein the system module further comprises a system housing having an interior portion with a the plurality of openings therein, each said opening adapted to receive one of said containers, and wherein said interior portion of said system housing is movable such that each said container is capable of being moved proximate to said laser and said detector.

120. (previously presented) The system of claim 119, wherein said housing is substantially circular, wherein said openings are disposed circumferentially about said interior portion of said housing, and wherein said interior portion of said housing rotates to move said containers proximate to said laser and said detector.

121. (previously presented) The system of claim 113, wherein said containers comprises a sample vial having a neck, and wherein said lasers emit said radiation through said neck of said containers.

122. (previously presented) The system of claim 113 wherein said detector unit further comprises a bracket upon which said plurality of lasers and said plurality of detectors are mounted

bracket, wherein said lasers and detectors are mounted in spaced apart relation on said bracket to allow a portion of the container to pass between said laser and its associated detector.

123-145. (canceled)

146. (new) A system for detecting the growth of microorganisms in a sample in a container, comprising:

an apparatus comprising:

a module comprising a plurality of openings configured for receiving sample containers;

a detector unit comprising a plurality of lasers each of which emit radiation at a substantially single wavelength, that wavelength being one at which a gas selected from the group consisting of O_2 , CO_2 , NH_3 , H_2S and CH_4 absorbs radiation, said substantially single wavelength at which CO_2 absorbs radiation being approximately 2.004 micrometers, and wherein at least a first laser emits radiation at a wavelength that is different from at least one other laser and a plurality of detectors, each of which is associated with a laser wherein each detector detects at least a portion of said radiation emitted from its associated laser, and wherein the detectors are positioned relative to the lasers such that a gas-containing portion of the sample containers can pass between said laser and said detector;

a signal analyzer that analyzes said detected radiation from said plurality of lasers to determine a parameter from a plurality of said gases, said parameter selected from the group consisting of the pressure of the gas in the container, the concentration of the gas in the container and the presence of the gas in the container; and

sample containers that are substantially optically transparent at said emission wavelength of said plurality of lasers and wherein said detector unit further comprises a housing, said plurality of lasers and said plurality of

detectors being movably disposed within said housing, said housing being movable such that said lasers and said detectors are capable of being located proximate to each of said containers.